

Colour, form, animals and deception in the ice age

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ABSTRACT – *Vision is the main sense through which we observe and recognise the outside world. Humans are among the few mammals with trichromatic vision, which is important for food procurement and evading predators. For better hunting success, ice age people camouflaged themselves as animals. It is possible that without such an ability for deception, symbolic thought would never have evolved. Because vision is so important to humans, visual forms of the transmission of information emerged early in the history of modern humans, and today we call them Palaeolithic art. Colour and form are the principal elements of this art, but because of the lost context, we are unable to understand completely what they meant to ice age artists.*

IZVLEČEK – *Vid je glavno čutilo, s katerim opazujemo in spoznavamo svet okrog nas. Ljudje smo med redkimi sesalci, ki imajo trikromatski vid, ki je koristen tako pri pridobivanju hrane, kot pri izogibanju plenilcem. Da so si izboljšali možnosti pri lovu, so se ledenodobni lovci preoblekli v živali. Morda se brez takšnih sposobnosti zavajanja ne bi nikoli razvilo simbolično mišljenje. Ker je vid za človeka tako pomemben, je že zgodaj v svoji zgodovini izumil vizualne sisteme prenosa informacij, ki jih danes imenujemo paleolitska umetnost. Barva in oblika sta bistvena elementa te umetnosti, vendar zaradi izgubljenega konteksta ne moremo povsem razumeti, kaj sta pomenili ledenodobnim umetnikom.*

KEY WORDS – *Palaeolithic; Palaeolithic art; colour vision; form, animals*

Introduction

For most people, vision is the main sense through which they perceive the outside world. We see the form, colour and size of objects and we perceive their distance and movement. Through vision it is also possible to detect the facial and body expressions of other people and, to some degree, experience what they are feeling. For ice age hunter-gatherers, vision was important in obtaining food. Together with good memory and an advanced capacity for problem solving, excellent vision was also important for detecting predators camouflaged with spots and lines to blend with the background (*Hodgson & Helvenston 2006*).

Colour vision

Humans have trichromatic vision, which means that three protein pigments in the retina, called opsins,

absorb different wavelengths of light. Accepted information is then processed in the brain and a colour picture appears. Trichromatic colour vision is rare among mammals, occurring only in humans, apes and some species of monkey. It enables them to detect coloured food items such as fruit and fresh leaves against the foliage of the forest (*Rowe 2002; Caine & Mundy 2000*). The human ability to see and identify colours and forms evolved because it ensured advantage for survival. For humans, some colours might be subconsciously connected with certain foods, which is why we find them pleasing. Since food is essential for our survival, everything related to nutrition has a strong emotional impact and is connected symbolically to life. These subconscious feelings might have been even stronger in the Palaeolithic, when food procurement was the main occupation in life, and vision was the most important

instrument for obtaining it. The colours of food such as red, orange, yellow and green please us and give us satisfaction. They are symbols of life, while dark brown and black, which in nature are colours of decay, arouse negative feelings and are symbols of sickness and for death. This is also reflected in the colours of traditional shamanistic healing, which are red and black (Rudnick 2004.165) and might be seen as symbols of the battle between life and death which takes place during sickness. In the Palaeolithic, red and black pigments are known from many sites, so these two colours probably had some sort of symbolic meaning. For example, in Sungir, a pendant of a red horse with black spots was found in the cultural layer (Fig. 1), and some of the body decorations in the burials of the man and two children from this famous Russian site were also painted in red and black (White 1993; 2003).

Trichromatic vision is important in detecting more than one colour, but in some cases dichromatic vision may also have advantages, like improved spatial vision and a better ability to detect colour camouflage. When objects are camouflaged with large, irregular patches of colour, someone with trichromatic vision may fail to detect it, since the overall contours of the object are lost in a confusion of patches. Dichromats (people with red-green colour blindness) are less sensitive to the profusion of colours and are more likely to detect such objects. They may also have an improved ability to detect edges and contours in coloured objects (Regan *et al.* with ref., 2001). For this reason, dichromats can detect colour-camouflaged objects much better than trichromats. This is an important advantage when hunting colour camouflaged prey (Morgan *et al.* 1992; Yokoyama & Takenaka 2005; Regan *et al.* 2001). A group of foragers is more efficient, if it is composed by individuals with a wide range of gathering skills. If dichromats are able to penetrate some kinds of camouflage more effectively than trichromats, their presence in the group would be an advantage (Morgan *et al.* 1992). In the Palaeolithic, there were two ways to obtain food – gathering and hunting. Trichromatic vision would be more suitable for gathering, while for hunting it may be even better for the group if dichromats were included.

Human dependence on vision is also the reason, that visual forms of communication and information storage emerged early in the history of modern humans. Today, in western culture, the written word is omnipresent, and there are few members of western

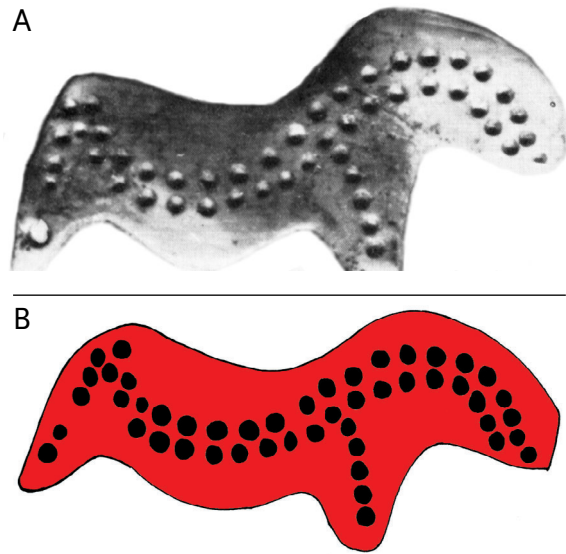


Fig. 1. A. Pendant in the form of a horse. Sungir (after Abramova 1967.Fig. 23). B. Colour reconstruction of the pendant.

society unable to read. But at the beginning of our history pictures were created to tell stories and to transmit information to future generations. During the ice age, pictures, and sculptures as their three-dimensional counterparts, were a source of information which was transmitted through space and time

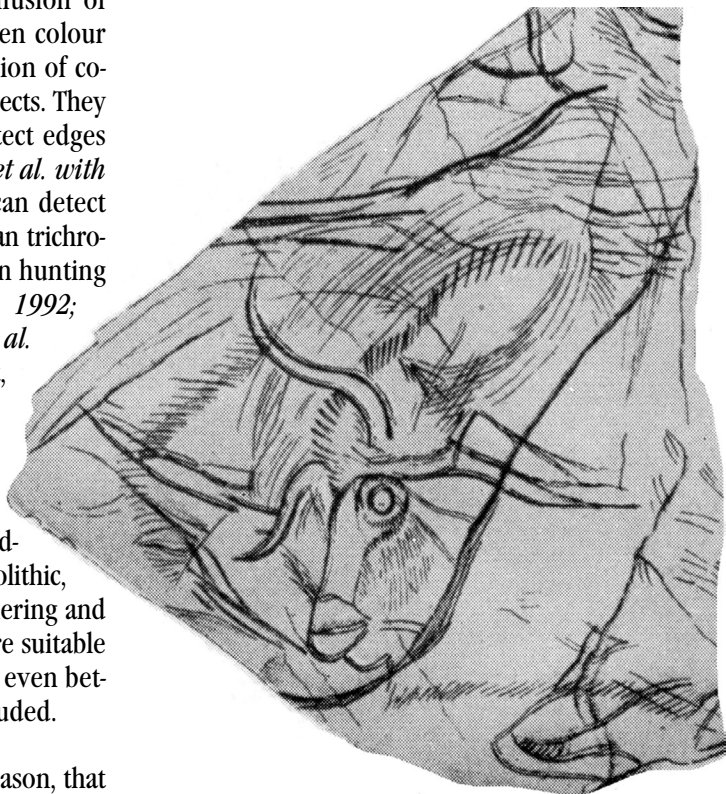


Fig. 2. Engraved image of a bison. Is this merely mundane, utilitarian information about the animal, or does it have a symbolic meaning? Or both? Mas d'Azil (after Graziosi 1956.Fig. 78).

and at different levels of cognition. Even today there are examples of story-telling with pictures, like the 'storyboards' from the island of Palau in the Micronesian archipelago, where myths, historical events and other stories are carved on wood boards (Bendure & Friary 1995: 216).

From animals and deception to form and symbolism

Animals are the main subjects of Palaeolithic art, which is one of its most distinctive characteristic (Figs. 1, 2, 9, 10, 11). This is a reflection of the profound human interest in animals and their behaviour, which is still present today. Many people travel to distant places to join safaris or take their children to the zoo to observe different animals.

It was essential for ice age hunters to understand animal behaviour, since animals were not only a source of food, but also a considerable threat. Those individuals who knew animals and their behaviour well and were able to efficiently identify different sorts of animals had more chance of surviving (Hodgson and Helvenston 2006). For this reason, it was important for ice age hunters to study and imitate animals, and learning these skills probably started in early childhood. Experience and knowledge were not only shared orally, but also visually, with play and images, because visual memory was also important, and through play and pictures some characteristics of animals and their behaviour could be better expressed than through stories.

Animals can deceive hunters or prey with colour and form (colour camouflage, mimicry), but this is not conscious deception (Fig. 3), while humans developed various intentional and conscious techniques for deceiving animals by observing them and contemplating their behaviour.

Before hunting, Palaeolithic hunters might cover their bodies with animal hide, and sometimes even with antlers, to change their form, and they might use animal drop-



Fig. 3. Animal camouflage – unconscious deception.

pings to mask their odour. To imitate animal sounds and attract prey, they probably used bone whistles or other instruments, and by decorating their bodies with ochre and other pigments, they camouflaged themselves with colour (Figs. 4, 5).

Intensive colours, like those of predators or poisonous animals and plants, might also be used for body painting to give hunters a feeling of power and

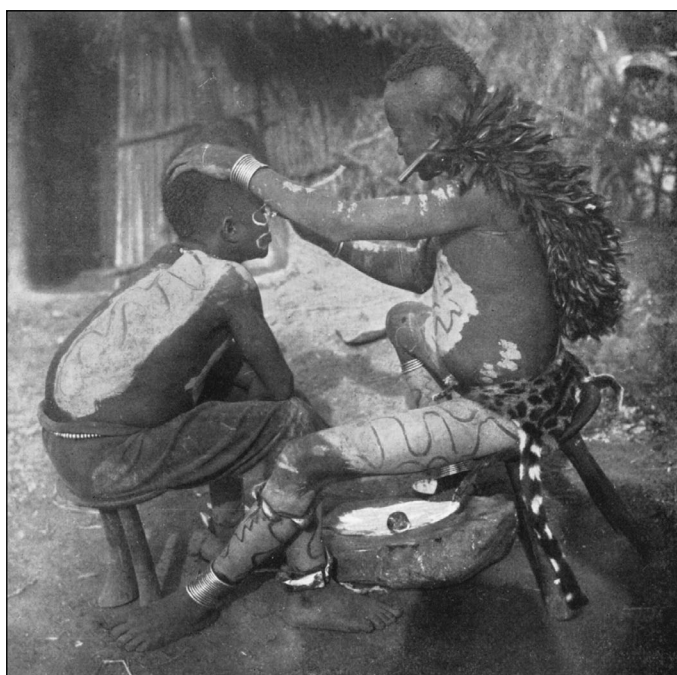


Fig. 4. Human camouflage – conscious deception (after Buschan 1922, Fig. 444).

to frighten intruders away from their territory. It is possible that body decoration developed from hunting camouflage (Figs. 4, 6).

Gradually, hunters may start to believe that by imitating different animals, they symbolically acquire their power and skills. Successful hunters were able to quickly recognise the forms of different animals, but they also knew animal behaviour, like present-day hunters in indigenous societies who, in their minds, become one with the hunted animal, which enables them to predict how the animal will react.

There is a biological basis for this sort of behaviour. Apes and humans have developed 'mirror neurons', which enable us by observing another individual's actions to 'resonate' with those actions. This is why we can experience empathy, and have an improved understanding of others, and can communicate so well (Hodgson & Helvenston 2006).

People who were able to deceive animals and were able to hunt them more efficiently than others may have been perceived as more powerful and may have had a special position in the group. Besides

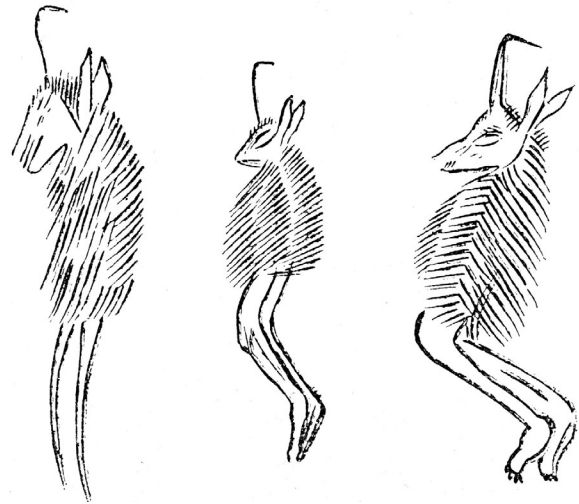


Fig. 5. Dancing 'little devils', from l'abri Mège (Grottes de la Mairie-Teyat). Engraving of animals with human postures – probably people dressed to represent animals (drawn by Breuil, in Macalister 1921.Fig. 136).

their own, they also incarnated the power of the chosen animal and impersonated the 'soul' of the animal to which they were connected by wearing its pelt. This is reflected in representations of so-called 'composites' (part human, part animal) in rock art (Fig. 7).

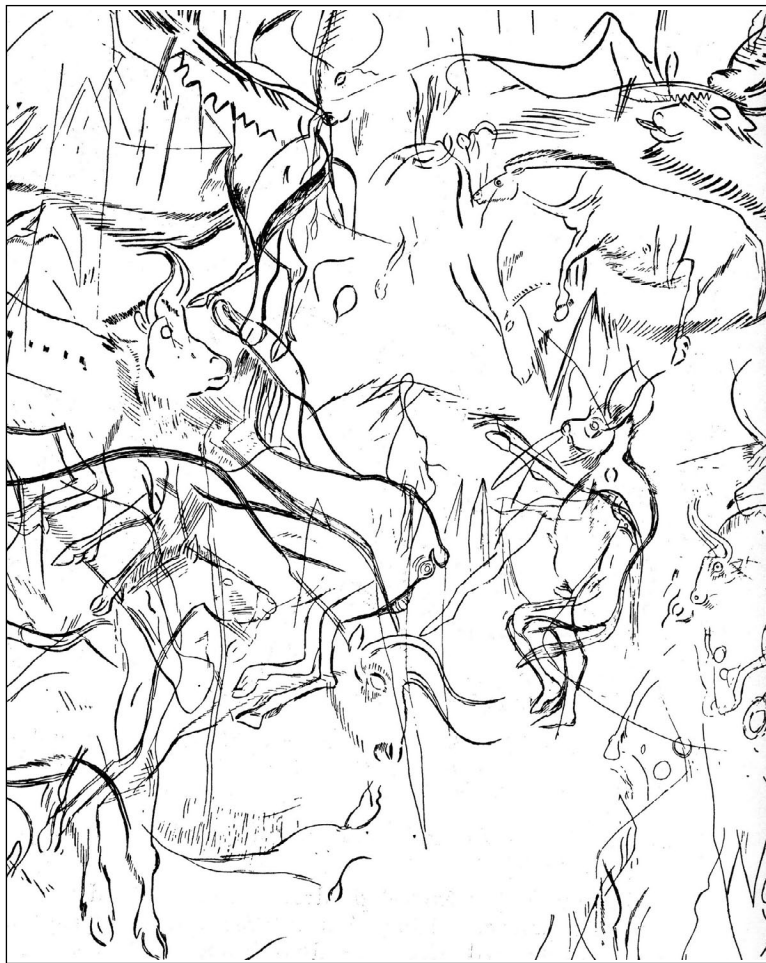


Fig. 6. Body decoration, Melanesia (after Buschan 1922).

Today, shamanism in various indigenous societies is the closest reflection of the probable idea behind composites in Palaeolithic art (Fig 8). It is impossible to know the beliefs of Palaeolithic painters, but there are indicators that they were able to experience altered states of consciousness or trance, which is also characteristic of modern shamans (Lewis-Williams & Dowson 1988; Clottes & Lewis Williams 1998; Lewis-Williams 2002). Shamanism and animism are ideal forms of belief for hunter-gatherers, since they are reflections of the close connection between humans and animals in hunter-gatherer societies. Trance can be stimulated (besides other methods) by hunger or prolonged isolation (Lewis-Williams 2002.124). Such stressful situations can occur during a prolonged hunt or during periods of food shortage, which probably quite often appear in societies with few reserves. For hunters it was important to have an explanation for states of altered consciousness and to understand or even control them. They induced such states artificially, often with the aid of hal-



Fig. 7. The so-called 'Bison man' from Les Trois Frères cave, who plays musical bow. He has human and animal characteristics and is surrounded by animals (after Bégouën & Breuil 1958.Figs. 61–63).



lucinogens, to get used to them in the safe environment, so they were prepared if trance occurred unintentionally because of physical stress.

A second characteristic of shamanism is the close relation of shaman and animal during a trance. Animals are the shaman's spirit guides, and identification with them is even more intense during states of altered consciousness than normally. An individual who experiences trance is transformed into an animal and can feel complete anatomical changes (Clottes & Lewis Williams 1998.17). A shaman in a trance is not human, but has changed psychologically into an animal. In this state, the form, colour, characteristics and behaviour of the animal are further imprinted in the subconscious and enable the person to even better understand animals when in a normal state of mind.

Ice age people learnt to deceive animals in order to catch them more easily, but deception may also be the reason for the origin of symbolic thought. When deceiving, different meanings are given to things and to words. Reality is not what is perceived, but some-

thing totally different. So real things obtain different meanings and become symbols for something else. It is possible that without the ability for deception, humans would never have been capable of inventing and understanding symbols. When things are perceived as they are, there is no space for symbolic thought.

The changing of the real forms into symbols later in history enabled the formation of picture writing (pictography). Colour was an insignificant part of pictograms, because it is form which gives us more information about the perceived object. Outlines are sometimes more effective than full colour pictures, which have more information. This extra information can in some cases distract attention from the defining attributes of the object we are observing (Ramachandran & Hirstein 1999.24). Like everything else, the perception of colours and forms has to be learnt. Blind people who regain their sight after an operation do not recognize objects. They see something, but they do not know what it is. It is possible for them to recognise objects by touching them, but they can not recognise the same objects



Fig. 8. 'Modern' Siberian shaman. A trance is achieved by rhythmic drumming (after Buschan 1922. Fig. 308).

by sight. The process of learning is slow; they learn to recognise movement and colour first, size and distance after that, and form at the end of the process. In the visual field, a fundamental differentiation is to distinguish form from the background. Form is unbroken and organised, while background is indefinite and unorganised (Pečjak 2006.50, 51). So, form is the most complicated visual effect to learn, but it also contains most of the information about the objects around us. People with normal sight perceive objects as a mixture of form and colour. But it is easier to transmit information by means of form than colour. Rhinoceros and elephants are more or less the same colour, especially when

seen from a distance, but the form of the two animals is different for an observer even if they are far away. Form defines the object, while colour fills it with energy. Form is more durable than colour, if it is manufactured in an appropriate manner and in an appropriate material. In the Palaeolithic, representations were sculpted (Figs. 1, 9), engraved (Fig. 2), painted (Fig. 11) and sometimes even shaped in clay (Fig. 10).

Colour symbolism is different from the symbolism of form, since many objects share the same colour, while form defines only one type of object. In colour symbolism, several objects are presented as the same. Blue means sky, sea and river. All three are connected with water. So blue is an appropriate symbol for water, and includes all forms of water and the sky. On the other hand, the same object is sometimes symbolically represented by different forms. On the portable Palaeolithic art from Russia, the symbolic patterns for water are different: fish-scales, bands, ladders, zigzag lines... (Marshack 1979). Colour was probably never part of water symbolism in the Palaeolithic, since blue pigments were not obtainable (Couraud 1983.107; 1988.20).

Interpreting the images

In Palaeolithic art, an image is a composition of form and colour and its primary role is to transmit information. Aesthetics is only of secondary importance, and means that the information we get from an image is for some reason close to us, comforts us and gives us a feeling of satisfaction (Fig. 11).

An image can also be an object of worship if it gives us emotional satisfaction, which is why it could be a very powerful agent of manipulation. The creator of an image imposes certain information on the observer, which could be tied to time and space, but could



Fig. 9. Sculpture of feline. Isturitz (after Graziosi 1956. Fig. 46).

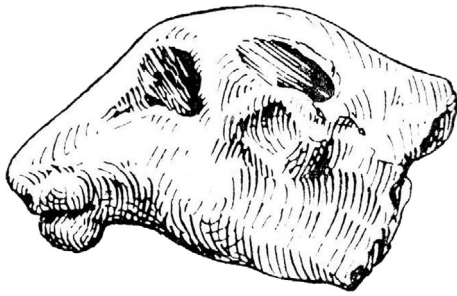


Fig. 10. Clay animal head. Dolni Vestonice (after Zotz 1951.Fig. 18).

also exceed those limitations and address a viewer who is distant temporally or spatially from the person who created it. The problem is that the information which was transferred by the picture 20 000 years ago is not the same that a viewer in 21st century will take from it. To understand the picture properly, the creator and viewer must be the part of the same cultural circle; otherwise, the meaning of the picture will be quite different for each of them. This can be demonstrated with images made by North American Indians in historic times (Kulundžić 1951). The picture (Fig. 12) appears packed with symbols and symbolic animal forms, but in reality it is just a love letter from an Indian girl to her lover and an

invitation to a meeting in her wigwam. The girl is a member of the bear clan, which is represented by an image of a bear (B). She and her two friends are drawn as three crosses (A, E, F) and they live in two wigwams (triangles C, G), placed near two lakes (J and K). From the second wigwam the footpath leads to the main road (H). From main road, another footpath branches off to her lover's wigwam (I), who is a member of the fish clan (D). The small figurine in the left triangle (C) marks the meeting point of the lovers.

This demonstrates how difficult it is to interpret the meaning of a picture if the viewer does not share the cultural environment with the creator of the image. So the picture is in a way a foreign language to someone who does not understand it. It can contain intimate information intended for one person only, as in the case of the enamoured Indian girl, selected information interesting for a chosen group of people, or general information for anyone who is part of a group with the same cultural values and is able to understand the information.

There have been various interpretations of Palaeolithic art, from first ideas that it was mere decoration



Fig. 11. Horses, cattle and reindeer from the Lascaux cave. Does this painting please us because of its deep symbolic meaning, because of our innate feeling for aesthetics, or simply because it subconsciously reminds us of food? (after Graziosi 1956.Fig. 171).

or a reflection of sympathetic magic, to structuralist and shamanistic theories (Clottes and Lewis Williams 1998; Bahn & Vertut 1999). Some ideas were quickly forgotten, others lasted for longer periods, but all of them largely mirrored the time in which they originated and the knowledge and values of that time (Bahn & Vertut 1999:207, 208), but what the art meant to ice age people remains a mystery.

Conclusion

In Palaeolithic art a lot of information about its creators is hidden, but the communication channels through the millennia are not clear, so we are left to our imaginations and the fact that we are descendants of ice age painters, to overcome obstacles that obstruct our understanding of the first artists. Cultural and artistic values have developed in the course of time, but we are still the same species that decorated Altamira and Lascaux. Just like them, we try to

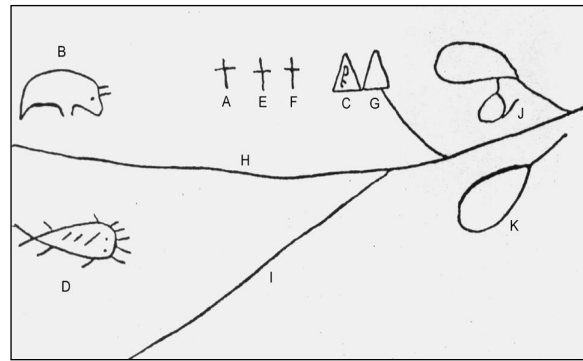


Fig. 12. Indian 'love letter' (transformed after Kulundžić 1951.Fig. 31).

understand the world around us and the different influences that affect our lives. Because of our close kinship, we try to find a connection between the behaviour and beliefs of Palaeolithic people and our own, which is why colour and form combined by distant artists to create an image is a constant challenge to our imagination.

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